Attorney Docket No.: 9438-2 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Stephen P. DeLisle et al;
Application Serial No.: 10/750.710 Group No.: 3711
Filed: January 2, 2004 Examiner: Steven Wong
For: **GOLF TEE WITH SUPPORT PRONGS**

Date: February 6, 2006

Mail Stop Appeal Brief-Patents
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TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 41.37)

1. Transmitted herewith is the APPEAL BRIEF for the above-identified application, pursuant to the Notice of Appeal filed on October 4, 2005.

2. This application is filed on behalf of
☒ a small entity.

3. Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:
☒ small entity $250.00
☐ other than small entity $500.00

Appeal Brief fee due $250.00

☒ Any additional fee or refund may be charged to Deposit Account 50-0220.

Respectfully submitted,

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Joyce Paoli

Attorney Docket No. 9438-2 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Stephen P. DeLisle et al.
Application No.: 10/750,710
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Confirmation No.: 2828
Group Art Unit: 3711
Examiner: Steven Wong

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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed on October 4, 2005.

REAL PARTY IN INTEREST

The real party in interest is Evolve Golf, Carolina Shores, North Carolina, pursuant to the Assignment from the inventors recorded at the U.S. Patent and Trademark Office on October 12, 2004 on reel number 015236 and frame number 0981.

RELATED APPEALS AND INTERFERENCES

Appellants are aware of no appeals or interferences that would be affected by the present appeal.

STATUS OF CLAIMS

Claims 1-6, 8-10, and 12-43 are pending in the present application as of the filing of this Brief. As of the filing date of this Brief, Claims 1-4, 8-10, 12 and 13 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 1,645,001 to Hodges (Hodges) in view of U.S. Patent No. 1,644,979 to Clausing (Clausing) in the Final Office Action dated July 5, 2005 (the Final Action). Claims 5, 21 and 35 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and U.S. Patent No. 2,693,358 to Dawson, Jr. (Dawson). Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and U.S. Patent No. 2,455,705 to Seager (Seager). Claim 14 stands

rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and U.S. Patent No. 6,710,135 to Tan (Tan). Claims 15-19, 22-27, 29-33, 36-40, 42 and 43 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson. Claims 20 and 34 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson and Seager. Claims 28 and 41 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson and Tan. Appellants appeal the final rejection of Claims 1-6, 8-10, and 12-43.

STATUS OF AMENDMENTS

The Appendix of Claims submitted herewith reflects the state of the claims as entered after the amendments made thereto in Appellants' Amendment and Response to Office Action dated 15 September 2004.

SUMMARY OF CLAIMED SUBJECT MATTER

The subject matter of the present patent application, as recited in Claims 1-6, 8-10 and 12-43, relates to a golf tee for striking a golf ball with a golf club. Most golfers place a golf tee in the ground and position the ball on the tee because there is a greater margin for error in striking the ball when the ball resides above the ground. Often a greater distance can be achieved when a tee is used.

A conventional wooden golf tee includes a cupped support surface upon which the ball rests and a cylindrical shaft, underlying the support surface, which penetrates the ground. The radius of curvature of the support surface is usually about the same as that of the ball, and the rim of the support surface, which typically has a diameter of about 0.500 inch, ordinarily has a relatively sharp edge. The shaft is substantially cylindrical and terminates in a pointed tip.

However, the contact between the support surface and the ball creates friction that can negatively impact the launch of the ball from a conventional tee. Most, if not all, of the support surface of the tee is in contact with the ball as the ball rests thereon. In addition, the sharp edges and any imperfections of the rim of the tee can "catch" on the surface of the ball and further increase the friction on the launched ball as well as impart a degree of side spin

onto the ball that can reduce accuracy. Also, the sharp rim of the tee is also somewhat fragile and can be damaged as the club face strikes it.

Embodiments of the present invention can address these and other issues. Certain embodiments of the present invention are directed to a golf tee (such as the tee **10** shown in **Figure 1** below) comprising: an elongate shaft (such as the shaft **12** in **Figure 1**) having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and a support cup (such as the cup **20** in **Figure 1**) that is configured to support a golf ball from beneath and that merges with the shaft.

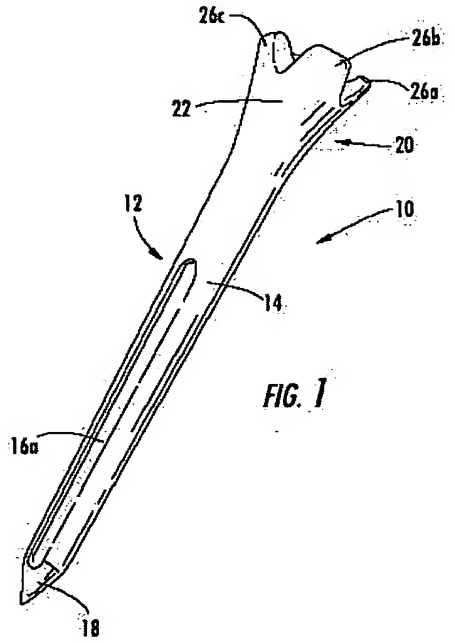

FIG. 1

The support cup has a base portion **22** having a concave upper surface **24** (*see* **Figure 2** below) and further includes at least three arcuate support prongs (such as the prongs **26a, 26b,** and **26c** in **Figure 1**) projecting upwardly from the base portion. The support prongs define a discontinuous annulus about the periphery of the support cup and the base portion upper surface has a radius of curvature ρ_1 (*see* **Figure 5A** below) of less than 0.6 inch, such that a golf ball resting on the support prongs does not contact the base portion upper surface. In this configuration, the contact area between the support cup **20** and the ball can be reduced,

which can in turn reduce the amount of friction between the ball and tee **10** and decrease the risk of imperfections in the tee negatively impacting ball flight.

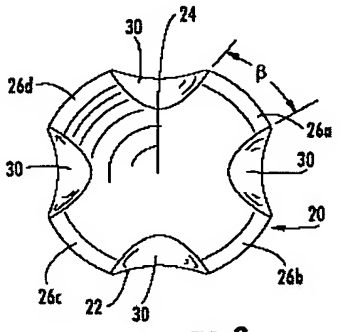

FIG. 2

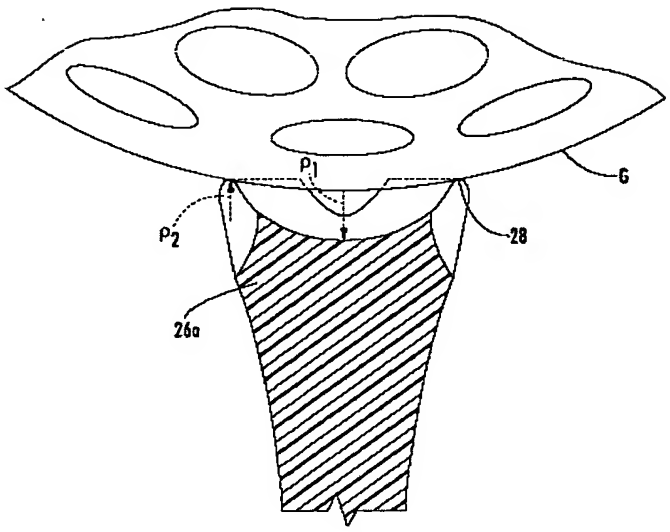

FIG. 5A

Other embodiments of the present invention are directed to a golf tee (such as the tee **10** shown in **Figure 1**) comprising: an elongate shaft (such as the shaft **12** in **Figure 1**) having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and a support cup (such as the cup **20** in **Figure 1**) that is configured to support a golf ball from beneath and that merges with the shaft. The support cup has a base portion **22** and further includes at least three arcuate support prongs (such as the prongs **26a, 26b,** and **26c** in **Figure 1**) projecting upwardly from the base portion. Each of the support prongs has a convex contact surface **28** (*see* **Figure 5A**) and is of a secant length **β** (*see* **Figure 2**) that is greater than the diameter **D** (*see* **Figure 3** below) of a golf ball dimple. The inclusion of the convex contact surface **28** on the prongs can reduce the amount of contact area between the tee **10** and a golf ball resting thereon, which in turn can reduce the friction between the ball and the tee **10** and the influence of surface imperfections in the tee on ball flight. With a prong that has a secant length **β** that is greater than the diameter **D** of a golf ball dimple, the interaction between the prong and the golf ball should be limited to the outer

skin of the golf ball (*i.e.*, that portion of the outer surface of the golf between the dimples), which can reduce the friction between the tee **10** and the golf ball. Again, in this configuration, the contact area between the support cup **20** and the ball can be reduced to that portion of the golf ball that is outside the golf ball dimples.

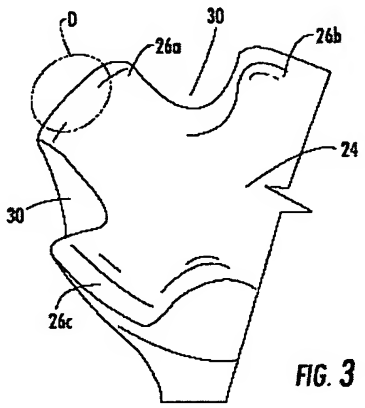

FIG. 3

Additional embodiments of the present invention are directed to a golf tee (such as the tee **10** shown in **Figure 1**) comprising an elongate shaft (such as the shaft **12** in **Figure 1**) and a support cup (such as the cup **20** in **Figure 1**) as described immediately above wherein each of the support prongs has a convex contact surface **28** and is of a secant length **β** such that the total contact area between the contact surfaces and a golf ball resting on the contact surfaces is between about 0.0036 and 0.0045 in^2.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether Claims 1-4, 8-10, 12 and 13 are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing.
2. Whether Claims 5, 21 and 35 are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and Dawson.
3. Whether Claim 6 is properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and Seager.

4. Whether Claim 14 is properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Clausing and Tan.
5. Whether Claims 15-19, 22-27, 29-33, 36-40, 42 and 43 are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson.
6. Whether Claims 20 and 34 are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson and Seager.
7. Whether Claims 28 and 41 are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Hodges in view of Dawson and Tan.

ARGUMENT

A. Introduction

To establish a *prima facie* case of obviousness, the prior art reference or references, when combined, must teach or suggest all of the recitations of the claim, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. § 2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. § 2143.01, citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). As stated by the Court of Appeals for the Federal Circuit, to support combining references, evidence of a suggestion, teaching, or motivation to combine must be clear and particular, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). The Court of Appeals for the Federal Circuit has also stated that, to support combining or modifying references, there must be particular evidence from the prior art as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *In re Kotzab*, 55, U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

B. Rejections Under Section 103(a) of Independent Claim 1 and Claims Dependent Therefrom

The Final Action rejects Claims 1-4, 8-10, 12 and 13 under Section 103(a) based on U.S. Patent 1,645,001 to Hodges (Hodges) in view of U.S. Patent No. 1,644,979 to Clausing (Clausing). The Final Action also rejects Claim 5 based on Hodges in view of Clausing and U.S. Patent No. 2,693,358 to Dawson, Jr. (Dawson), Claim 6 based on Hodges in view of Clausing and U.S. Patent No. 2,455,705 to Seager (Seager), and Claim 14 based on Hodges in view of Clausing and U.S. Patent No. 6,710,135 to Tan (Tan). The Final Action characterizes Hodges as disclosing:

> a golf tee comprising an elongate shaft (10) and a support cup (11). The support cup has a discontinuous annulus (note Figure 2) defining three arcuate support prongs (15).

The Final Action at page 2. The Final Action also states that:

> Clausing discloses a golf tee including a concave support surface (8) that does not contact a golf ball (note Figure 3). It would have been obvious to one of ordinary skill in the art to form the golf tee of Hodges with a radius of curvature for the support surface such that the golf ball only contacts the prongs in order to minimize the resistance to the golf ball at the moment of departure from the tee.

The Final Action at page 2.

However, Appellants respectfully disagree with the position taken in the Final Action. Appellants submit that the motivation cited in the Final Action to combine Hodges and Clausing is improper in view of the teachings of Hodges. As noted in the present specification, tees of the present invention may have a base upper portion that does not contact a golf ball in order to reduce the surface area of the tee that is in contact with the ball. The reduced surface area of contact can reduce the degree of friction between the ball and the tee, thereby increasing distance when the ball is struck with a golf club. In contrast, Hodges states that:

> In order that the ball be more securely seated in the saucer shaped head of the tee, the edges of the head may be notched

> or recessed as indicated at 14 causing spaced sections in the edge of the rim to engage with the surface of the ball, these edge portions fitting into the dimples or recesses in the surface of the ball.

Hodges at page 1, lines 100-108. Thus, Hodges teaches that it is desirable that the ball be "securely seated" and that the "edge portions" of the "spaced sections" fit into the dimples or recesses in the ball. This teaching is in direct contrast to the desired result of a tee that has the prongs and concave base portion upper surface as recited in Claim 1. Therefore, Appellants submit that the ordinarily skilled artisan would not have been motivated to combine Hodges with Clausing (and, in fact, would have been disinclined to do so). As such, it is improper to combine these references. Thus, Appellants respectfully request that the rejection of independent Claim 1 and dependent Claims 2-6, 8-10 and 12-14 be reversed.

C. Rejections Under Section 103(a) of Independent Claims 15, 29 and 43 and Claims Dependent Therefrom

The Final Action rejects Claims 15-19, 22-27, 29-33, 36-40, 42 and 43 under Section 103(a) based on U.S. Patent 1,645,001 to Hodges (Hodges) in view of U.S. Patent No. 2,693,358 to Dawson (Dawson). Additionally, the Final Action rejects Claims 20 and 34 based on Hodges in view of Dawson and U.S. Patent No. 2,455,705 to Seager (Seager), Claims 21 and 35 based on Hodges in view of Dawson and U.S. Patent No. 1,644,979 to Clausing (Clausing), and Claims 28 and 41 based on Hodges in view of Dawson and U.S. Patent No. 6,710,135 to Tan (Tan). The Final Action concedes that:

> Hodges lacks the teaching for support prongs to comprise a convex contact surface with the golf ball.

The Final Action at page 3. Nonetheless, the Final Action states:

> Dawson, Jr. reveals a golf tee construction including a contact surface for a golf ball. Note Figures 2 and 3a showing a non-convex contact surface (5) and a convex contact surface (15). Note also column 2, lines 52-54 stating that the convex contact surface provides a better seat for a golf ball.

The Final Action at page 3. Based on these characterizations, the Final Action concludes that it would have been obvious to the ordinarily skilled artisan to form the prongs of the Hodges tee with convex contact surfaces.

However, Appellants note that both the CCPA and the Federal Circuit have consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the primary reference, such a proposed modification is not proper and the *prima facie* case of obviousness cannot properly be made. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). Such would clearly be the case with the rejection at hand. The Hodges tee lacks the convex contact surfaces recited in independent Claims 15, 29 and 43. Hodges also states that the "edge portions" between the "spaced sections" are included so that "the ball may be more securely seated in the saucer shaped head of the tee," and that the "edge portions . . . [fit] into the dimples or the recesses of the golf ball." Thus, it is clear that the purpose of the spaced sections and edge portions of the Hodges tee are to increase, rather than decrease, interaction between the tee and ball. Conversely, the inclusion of convex surfaces on support prongs as recited in Claims 15, 29 and 43 can reduce the amount of contact area, and consequently friction and the like, between the tee and golf ball. Inasmuch as modifying the Hodges tee with convex surfaces as disclosed in Dawson would destroy the purpose of the edge portions of the Hodges tee, Appellants submit that a rejection based on Hodges in view of Dawson is improper.

Moreover, Appellants note that it is not entirely clear from Figure 3a of Dawson that the ball would actually rest on the bead 15; it may instead rest on the upper edges of the tube 12. As such, it is not clear that Dawson discloses this element. Of course, if this element is not present in Dawson, the rejection under Section 103(a) is clearly erroneous and cannot stand.

In view of the foregoing, Appellants respectfully request that the rejection of independent Claims 15, 29 and 43 and dependent Claims 16-28 and 30-42 be reversed.

CONCLUSION

On the entire record and in view of all the cited references, Appellants submit that Claims 1-6, 8-10 and 12-43 are patentable under Section 103(a). Accordingly, it is respectfully requested that the Examiner's conclusions be reversed, and that this case be passed to issuance.

Respectfully submitted,

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Signature: _____
Joyce Paoli
Date of Signature: February 6, 2006.

CLAIMS APPENDIX

1. (previously presented) A golf tee, comprising:

an elongate shaft having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and

a support cup that is configured to support a golf ball from beneath, the support cup merging with the shaft, the support cup having a base portion having a concave upper surface and further including at least three arcuate support prongs projecting upwardly from the base portion, the support prongs defining a discontinuous annulus about the periphery of the support cup; wherein the base portion upper surface has a radius of curvature of less than 0.6 inch, such that a golf ball resting on the support prongs does not contact the base portion upper surface.

2. (original) The golf tee defined in Claim 1, wherein each of the support prongs has a secant length that is greater than a dimple on a golf ball.

3. (original) The golf tee defined in Claim 2, wherein each of the support prongs has a secant length of at least 0.170 inch.

4. (original) The golf tee defined in Claim 3, wherein each of the support prongs has a secant length of less than 0.200 inch.

5. (original) The golf tee defined in Claim 1, wherein each of the support prongs has a convex contact surface adapted to contact a golf ball.

6. (original) The golf tee defined in Claim 1, wherein the at least three support prongs comprises four support prongs.

7. (canceled).

8. (original) The golf tee defined in Claim 1, wherein the elongate shaft includes flutes that resist twisting of the tee when the tee is inserted into the ground.

9. (original) The golf tee defined in Claim 1, wherein the elongate shaft includes a pointed tip at its lower end and a main body, the main body decreasing in diameter with increasing distance from the support cup.

10. (original) The golf tee defined in Claim 9, wherein in side view the main body of the elongate shaft forms a taper angle of between about 0.75 and 1.0 degrees over a length of between about 2.7 and 3.0 inches.

11. (canceled).

12. (original) The golf tee defined in Claim 1 formed of a biodegradable material.

13. (original) The golf tee defined in Claim 11 formed of a biocompostable material.

14. (original) The golf tee defined in Claim 11, wherein the biodegradable material comprises polylactic acid.

15. (original) A golf tee, comprising:

an elongate shaft having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and

a support cup that is configured to support a golf ball from beneath, the support cup merging with the shaft, the support cup having a base portion and further including at least three arcuate support prongs projecting upwardly from the base portion, each of the support prongs having a convex contact surface and being of a secant length that is greater than that of a dimple of a golf ball.

16. (original) The golf tee defined in Claim 15, wherein the secant length of the support prongs is at least 0.170 inches.

17. (original) The golf tee defined in Claim 16, wherein the secant length of the support prongs is between about 0.170 and 0.200 inch.

18. (original) The golf tee defined in Claim 15, wherein the convex contact surfaces of the support prongs have a radius of curvature of less than 0.060 inches.

19. (original) The golf tee defined in Claim 18, wherein the convex contact surfaces of the support prongs have a radius of curvature of between about 0.040 and 0.060 inches.

20. (original) The golf tee defined in Claim 15, wherein the at least three support prongs comprises four support prongs.

21. (original) The golf tee defined in Claim 15, wherein the base portion upper surface has a radius of curvature of less than 0.600 inch, such that a golf ball resting on the support prongs does not contact the base portion upper surface.

22. (original) The golf tee defined in Claim 15, wherein the elongate shaft includes flutes that resist twisting of the tee when the tee is inserted into the ground.

23. (original) The golf tee defined in Claim 15, wherein the elongate shaft includes a pointed tip at its lower end and a main body, the main body decreasing in diameter with increasing distance from the support cup.

24. (original) The golf tee defined in Claim 23, wherein in side view the main body of the elongate shaft forms a taper angle of between about 0.75 and 1.5 degrees over a length of between about 2.7 and 3.0 inches.

25. (original) The golf tee defined in Claim 15 formed of a biodegradable material.

26. (original) The golf tee defined in Claim 25 formed of a biocompostable material.

27. (original) The golf tee defined in Claim 15, wherein the base portion further comprises a generally concave upper surface

28. (original) The golf tee defined in Claim 25, wherein the biodegradable material comprises polylactic acid.

29. (original) A golf tee, comprising:

an elongate shaft having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and

a support cup that is configured to support a golf ball from beneath, the support cup merging with the shaft, the support cup having a base portion and further including at least three arcuate support prongs projecting upwardly from the base portion, the support prongs defining a discontinuous annulus about the periphery of the support cup, each of the support prongs having a convex contact surface and being of a secant length that is greater than that of a dimple of a golf ball.

30. (original) The golf tee defined in Claim 29, wherein the secant length of the support prongs is at least 0.170 inches.

31. (original) The golf tee defined in Claim 29, wherein the secant length of the support prongs is between about 0.170 and 0.200 inches.

32. (original) The golf tee defined in Claim 29, wherein the convex contact surfaces of the support prongs have a radius of curvature of less than 0.060 inch.

33. (original) The golf tee defined in Claim 32, wherein the convex contact surfaces of the support prongs have a radius of curvature of between about 0.040 and 0.060 inch.

34. (original) The golf tee defined in Claim 29, wherein the at least three support prongs comprises four support prongs.

35. (original) The golf tee defined in Claim 29, wherein the base portion upper surface has a radius of curvature of less than 0.6 inch, such that a golf ball resting on the support prongs does not contact the base portion upper surface.

36. (original) The golf tee defined in Claim 29, wherein the elongate shaft includes flutes that resist twisting of the tee when the tee is inserted into the ground.

37. (original) The golf tee defined in Claim 29, wherein the elongate shaft includes a pointed tip at its lower end and a main body, the main body decreasing in diameter with increasing distance from the support cup.

38. (original) The golf tee defined in Claim 37, wherein in side view the main body of the elongate shaft forms a taper angle of between about 0.75 and 1.5 degrees over a length of between about 2.7 and 3.0 inches.

39. (original) The golf tee defined in Claim 29 formed of a biodegradable material.

40. (original) The golf tee defined in Claim 39 formed of a biocompostable material.

41. (original) The golf tee defined in Claim 39, wherein the biodegradable material comprises polylactic acid.

42. (original) The golf tee defined in Claim 29, wherein the base portion further comprises a generally concave upper surface

43. (original) A golf tee, comprising:

an elongate shaft having opposed upper and lower ends, the lower end configured to be inserted into an underlying surface; and

a support cup that is configured to support a golf ball from beneath, the support cup merging with the shaft, the support cup having a base portion and further including at least three arcuate support prongs projecting upwardly from the base portion, each of the support prongs having a convex contact surface and being of a secant length such that the total contact area between the contact surfaces and a golf ball resting on the contact surfaces is between about 0.0036 and0.0045 in^2.

EVIDENCE APPENDIX

NONE

RELATED PROCEEDINGS APPENDIX

NONE